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ABSTRACT

A conceptual framework and guidelines for courses on population and development are outlined. Following an introduction, the first of five sections details the scope of a population and development course. A definition of an appropriate framework is provided and the role of population and development issues in such a course are described. Integration of population variables into the course is also considered. Section II, "Form and Content of Courses" provides a rationale and describes the curriculum. Section III, "Orientation of the Courses" is divided into subsections on senior management, middle level staff, educators and researchers, executing agents, and general information. Section IV provides recommendations for course admission requirements, and teaching requirements, and considers external conditions necessary for an effective course. The final section is devoted to the specific curriculum proposed for a course consisting of 825 hours spread over two academic years. Four instructional modules for each year are detailed. A three-page bibliography is included. (LP)

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Department of Technical Co-operation for Development

COURSES ON POPULATION AND DEVELOPMENT: ASPECTS OF TECHNICAL CO-OPERATION

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FOREWORD

The basic objective of the United Nations programme of technical co-operation in the field of population is to work with third world Governments to implement the World Population Plan of Action as adopted at Bucharest in 1974, on the occasion of the United Nations World Population Conference. This Plan was recently strengthened and supplemented by the International Conference on Population held at Mexico City from 6 to 14 August 1984.

The population policies and programmes envisaged by this Plan are closely linked to development plans. This was the main achievement of these two population conferences, which constitute historic milestones.

In the field of demography and population activities, a distinction must be drawn between "before Bucharest" and "after Bucharest". Before Bucharest, thinking was dominated by the unilateral approach advocating birth control as a formula for success. After Bucharest, population policies are more in the nature of a development strategy than of an independent policy. This is the spirit of Bucharest, confirmed subsequently at Mexico City.

A centre for the study and teaching of this interdependence between population and development was established in Bucharest under the auspices of the United Nations: the UN-Romanian Demographic Centre (CEDOR), which provided French-language services for third world countries, particularly in French-speaking Africa, between the two population conferences of 1974 and 1984. In co-operation with Moscow University, a similar programme for English-speaking countries has been set up in Moscow.

At the national level, technical co-operation has enabled Governments to establish population units in planning ministries or at the highest level of the administration, responsible for undertaking the research necessary for a better understanding of the interrelationships between population and development in each country and for formulating population policies on this basis within the framework of development.

A major part of this text is therefore devoted to establishing the conceptual framework which is a prerequisite for programme formulation. Emphasis is placed on the definition of concepts, and particularly the concept of development, and on the need for an interdisciplinary approach and for synthesis.

From reflection there emerge practical recommendations on the content and direction of courses: where to find the elements which will become a professional body capable of tackling and dealing with the problem in its multiple aspects, the political staff, the intermediate staff, the technicians specializing in population, the executing agents?

The recommendations also relate to the entrance requirements for courses, to the test of aptitude for synthesis, to the teaching conditions (the interdisciplinary option imposes certain conditions which differ from those for courses of the traditional type) and to external conditions for effectiveness.

The last chapter is devoted to the specific curriculum proposed for a course consisting of 825 hours spread over two academic years.

The first year should be devoted to the study of the conceptual framework of development, representing a first level of synthesis and covering, as an introduction to the programme, these four principal axes or modules:

(1) Knowledge of the context;

(2) The population component;

(3) The instruments of change;

(4) The techniques.

The second level of synthesis would be attained during the second year. A number of classes are recommended, leading to practical exercises (90 hours). A 10-hour seminar is planned to conclude the course, in order to allow a general debate providing a synthesis.

Lastly, it should be noted that 60 hours are devoted to the standardization of the initial training in mathematics, statistics and economics.

This provides guidance to stimulate a useful practice integrating population and development.

This document attempts to take into account the experience acquired in this field and to summarize it in a manner which can be useful for courses on population and development.

It is a guide, and not a textbook with pre-established formulas.

INTRODUCTION

In the space of a few years, the problems relating to the incorporation of population in development have again moved into the limelight. The concern with these problems is due to the growing interest resulting from the often disappointing actions and interventions over the past two decades in the area of applied development. Hence the increasingly acute need to systematize a pragmatism which appears to be marking time, in so far as it can no longer boast of indisputable results.

A pragmatism based on erroneous premises eventually becomes more unrealistic than the theory which it pretends to repudiate.

The broadening of the discussion is due primarily to the awareness of demographic growth trends. A number of demographers involved in the study of the third world, where population dynamics seem to pose particularly delicate problems, denounced the precarious alternative of a science which increasingly took refuge in an accounting approach. This was reassuring for those who did not want the study of populations to incur the risk of application based on its own lessons. This attitude, motivated by the range of demographic projections, which proved to be alarming, was reflected in a greater desire to move to action, in order to check population expansion.

However, the direct solution, reflecting an unsubtle view of the relationship between demography and the social context, very soon revealed its limitations. Firstly, even if it were to prove possible to reduce fertility to an appreciable extent, the inertia of population movements would prolong growth trends well beyond the time-limits considered to be acceptable for the future security of mankind. Secondly, hasty interventions in an environment which was often reluctant, not to say hostile, resulted in numerous failures as regards the limitation of births.

The transition to broader demographic studies and consequently a broader application of such studies was easily made by the World Population Conference, held at Bucharest in 1974. One of the recurring themes of that Conference was that population problems could no longer respond to a purely demographic solution. At both the explanatory and the pragmatic levels, they involved a conglomerate of socio-economic factors, which constituted the very foundations of development. The conclusions of the Conference, and particularly those in its World Plan of Action, made the understanding of demographic phenomena inseparable from the action taken to promote development. They advocated the pursuit of systematic population policies, along the lines of development plans, and integration of the former into the latter. On that basis, the Conference identified dimensions which had been deliberately ignored and of which the theoretical bases, apart from certain sporadic and often isolated investigations, remained largely unexplored. These concerns thus echo those which reflected the disappointments provoked by the spectacle of a development too long confined simply to economic growth.

At the same time, predating the technical co-operation effort leading to the mutually supportive theory and practice of development, and concurrently with attempts to go beyond descriptive demography, we see the main trends underlying academic training. For many decades, following a pragmatism accentuated by the diversity and complexity of technological developments, academic studies have opted for increasing specialization. While this has undoubted advantages, there is a

risk that such compartmentalization of areas of study may work to the detriment of any synthesis.

At the practical level, this dual situation carries the seeds of the malaise that will lead to an attempt to restore to phenomena the identity that they almost lost in the course of successive dissections, which provided the description and even the functional mechanism of the elements but failed subsequently to restore the original entity.

It was undoubtedly the inclusion of political choice in development activities which highlighted the dangers of too partial an approach. In technical co-operation, political choice is an attribute of national sovereignty. It reflects the desire to provoke change through decision-making and management. If international aid comes between the political choice and the acceptance of decisions, in other words at the "objective" level of the technical rationality prior to execution, it cannot fail to exert a realistic influence on the political choice and take it into account as a whole. As a result, when such aid promotes development, it can no longer limit development solely to economic factors, or else it will create distortions of viewpoint and of implementation that will affect not only the theoretical or financial aspect but also the human environment.

Lastly, it has become vital to reintroduce man in his plenitude, as an individual or member of a group, because in the traditional context pragmatism grapples with an area only sporadically affected by technology, which here does not call the tune. The third world countries are mainly not governed by modern economic rules, but they are largely the victims of their demography. The corollary of the failure of all prescriptions for achieving development is the difficulty of directing the demographic phenomenon in isolation from its substratum. The substratum is already known to be varied. Whether we consider strictly economic structures, such as some wished to abstract, or the socio-political system in existence, or the cultural foundations required when a project is introduced, the context and its specific aspects inevitably affect programmes for action.

This is why problems relating to population and development acquire a dimension whose importance can be seen in practice. The desire to confer on them the status of a privileged field of study and to consider instruction in such matters reflects the convergence of the numerous factors which militated in favour of reintegrating the demographic factor in the socio-economic phenomena of development. In so far as the subject and object of development merge in man, it is man, as the effective promoter of change, who must be taken into consideration.

How can we provide those who, at close hand or at a distance, will be required rationally to modify their environment with the instruments enabling them to do so with a full knowledge of the facts?

This question can be answered only if the scope of the course is specified. But this is an uncharted area; knowledge is just beginning to be acquired and a number of uncertainties still exist which require prudence and reflection when action is contemplated. For this reason, the text which follows cannot be reduced to a textbook promising infallible results and automatically providing ready-made methodologies. It is, on the other hand, a guide aimed at providing the structures for a curriculum dealing with population and development, emphasizing and justifying the multiple forms which development may take, depending on the practical objectives sought.

I. SCOPE OF THE COURSE

A. Definition of a conceptual framework

Any curriculum must be formulated in relation to its subject. The framework within which it is defined prevents misunderstandings due to lack of precision.

If it is not to become arbitrary, before any curricula are evolved, a course requires a conceptual framework; the more fluctuating the subject, the more precise the framework should be. If a stratified series of tested solutions existed, it would be possible to omit the premises from which the techniques for action have been developed. It would suffice to inculcate them in their present state, simply specifying their scope and limitations.

However, the existing situation makes it difficult to avoid defining this abstract framework. Despite practioners' unjustified mistrust of theory or of abstraction in general, it is necessary to specify the domain of relative independence of the problems relating to the pair population-development. To define a framework is, first and foremost, to remove the ambiguities which create confusion, particularly in development matters.

A practically-oriented course that has outmoded bases, vague concepts and commonplace ideas cannot be expected to provide a basis or even an incentive for worthwhile decisions. The final product is useful only if the foundations on which the implementation processes are constructed are solid.

What is meant by "conceptual framework"?

It is the coherent choice of the concepts used and their definition, particularly the concepts of population and development. But it is also important to spell out explicitly the theories, often implicit, which underlie these concepts and their relations, in a context which itself has to be specified. With such a framework, the relations envisaged lead easily to the formulation of the elements of a curriculum.

The curriculum will thus be the relational field of the academic disciplines likely to provide combined theoretical and instrumental bases.

In particular, considerable confusion has so far prevailed in the manner of dealing with development as a concept. For the sake of pragmatism, it was often thought advisable to define development by its objectives. The more the objective is general, vague and unattainable in the immediate future, the more its definition is likely to win the support of the majority and thus to cover any type of action. This is the case, for example, when the well-being of mankind is stated as the objective of development. Although this is a goal of every ideal long-term action, the general nature of the ultimate target obviates the need to specify the details and thus creates unanimous acceptance of a commonplace.

Unless one is satisfied with a superficial approach, a definition based on content and ignoring form is unlikely to render the idea of development, to show what it is and not what it seeks. Content is an objective and the objective is an intention.

Any content is thus highly charged with values, whether it reflects the cultural context or conveys the political aspirations of the society concerned. For example, when a Government decides to develop fallow land, it is the master of the strategic choice. It may opt for the construction of a hydroelectric dam. But, beyond the divulged intention, the aim pursued may be the settlement of nomadic populations or the production of certain kinds of industrial crops instead of food crops, in order to meet the requirements of international trade. It will always be possible to link up with the goals of well-being by buttressing the strategies adopted with an ad hoc theory coinciding with the announced objective.

The omnipresent coherence of the political choice thus highlights the ideological character of the concept of development, which may vary according to the entity using it. It thus becomes a general-purpose concept, subordinate to the circumstances and to personal viewpoints, in which case any course would satisfy the concept, so long as it serves the goals pursued.

An awareness of these difficulties sometimes leads to development being identified with its means and, finally, content being identified with the objectives set by the plan. But this merely postpones the problem, and the result is the same.

And so, to the extent that the definition sought must cover a neutral, universally applicable concept which is operational and conducive to specific results, it can be only a formal one. As such, it is immune to any value judgements and, by its degree of abstraction, may take into account all specific phenomena. It is in these conditions that the concept becomes operational and pragmatic. In addition, it meets the requirements of generality and objectivity. It will therefore be advisable to define development in terms of a process, setting aside all content and considering only the container.

In the formulation of the curriculum, development may be taken as the framework; but it should not be forgotten that it is not so much the components which count as the set consisting of their interrelationships. It is necessary, however, to know what are the terms of the relationship.

B. Population

In demography, population is defined in a general manner as an aggregate of individuals with a common property. The common property may be spatial, for example a particular territory, but it may also be any other attribute selected, such as nationality. The census in Lebanon, for example, considered as Lebanese the population living in Lebanon and the population living abroad.

But these individuals linked by a common criterion usually differ among themselves in other characteristics, which give rise to various groups within this set. These aspects - age, sex, etc. - determine the structure of the population, so that an instantaneous picture provides a description of the population. Since the fact that ages are taken into consideration confers a temporal viewpoint, this structure comprises elements which describe its past; its present-day image thus reflects its history. However, the population is affected by movements which are specific to it and which leave identifiable traces at the level of the structure. This is why the static image provided by a structure is only one instant of its dynamics.

Population dynamics are basically the result of processes of birth and death, equivalent to arrivals and departures; similarly, there are migratory movements, the balance of which is added to the population as an absolute value.

Thus a population may be defined in terms of a system, which amounts to a structure in which the equation of change provides the dynamics. The dynamics of a given population occur within a limited interval of variation, the terms of which are known. This interval is the length of life, from birth to extinction, of the birth cohort or set of persons born at the same time (day, month, year). It is the result of factors which variously affect the different age groups and of individual decisions, rendered homogenous to some extent by the specific context of cultural and political values; this is at all times reflected in the structure.

In such an arrangement, demography provides the accounting for the system, sometimes by reference to an accounting model, when it limits itself to the technical aspects.

However, when the population is to be related to the social system which it creates, account must be taken of the respective rhythms of evolution - demographic and social in the broad sense. Population movements are known to be characterized by inertia in relation to the spread of individual demographic events over a relatively large interval. Only the balance of such events affects the evolution of the population, whereas the social phenomenon concerns subsets of the population simultaneously, in proportion to their size. It seems logical therefore that, if the population determines the general context, it will tend to be affected by social factors, rather than to influence them itself.

In its technical aspects, demography has one advantage over the other related academic disciplines, owing to the homogenous nature of its subject and to the limited possibilities of experiencing in a relatively large interval of time, a far-reaching transformation of population structures. As a model, these structures are preserved. In the case of development, the situation is quite different.

C. Development

While it is relatively simple to grasp the concept of population, the problem of defining development is more complex. Whereas the concept of population refers to a tangible subject, whose actual existence can be verified at all times, development, even when it assumes material form, remains open to interpretation. There is by no means unanimity on the subject, even at the level of appearances. Development will be characterized sometimes by reference to its concrete effects, or the status of its achievements, and sometimes by reference to intentions, while on occasion it is identified with its means. Moreover, it has been demonstrated above that development should be considered as a process.

This initial confusion surrounding the very concept of development thus contrasts strikingly with the apparent immutability of the notion of population. Within a structure broken down for purposes of explanation, one may imagine a situation in which marriage is entirely replaced by consensual union, in which polygamy becomes the norm or in which the etiological inventory is radically altered; the basic population model will not be affected as a result. Only the

level of variation of its components will reflect the changes of status, but the model itself will undergo no alteration. In contrast, the models of development are innumerable.

When the demographic model is elaborated, the fundamental reality of life is omnipresent. Development has no such day-to-day tangible reality.

In addition, the notion of development, which is now essential to any national or international undertakings, emerged only recently. Unlike the notion of population, which reflects an unambiguous and immediately perceptible phenomenon, the idea of development seems at first sight not to be based on any appreciable reality. At most, it is a notion which interprets complex trends, simplified in an attempt to make them coherent.

The background to the emergence of the concept, barely four decades ago, helps to illustrate its contingent aspect. Born of findings made just after the war, the concept of development was formulated on the basis of the idea that the material disparities between the permanent indigence affecting a number of countries and the affluence enjoyed by some privileged nations represent a time lag. This suggests a lag in the unique linear process which leads gradually from destitution to wealth. Hence the idea of "underdevelopment" prior to "development". The concept of development therefore emerges in relation to a partially negative reality. It thus contrasts with stagnation, considered as the absence of development. But at the same time it is viewed fro[illegible] temporal perspective, if only by reference to stagnation which suggests immobility in time.

Thus we have the notion of a process. This is, of course, not a neutral process or objective mechanism, but a retrospective movement, the progression of which, induced a posteriori, assumes the character of a historical determinism that passes judgement on its outcome. In fact, nothing based on a specific phenomenon of a repetitive nature. Ultimately the two processes - population and development - are linked by their cumulative nature. But whereas the demographic balance may prove to be negative, development can be conceived and defined only by its progressive aspect and its positive result. It embodies its own goal. The concept of development is therefore normative.

From its inception, it is dynamic and diachronic and embodies its own solution, which is the lesson that should be drawn from Western experience.

Furthermore, the key to its success lies in the industrial model, itself governed by the laws of economics and the advances of technology. The next stage is to assimilate development to economic growth. It is paradoxical that the notion of absence or inadequacy of development should have preceded the actual concept of development, which is therefore based on a determinist and linear vision of history that could be described as a goal a posteriori. This concept is thus based on an interpretative abstraction and not on the quintessence of a reality. Starting from an abstraction, it will ultimately create its own materiality, which will in turn require a better defined concept. It is quite clear that the conc[illegible]pt is deeply rooted in the progressive model of industrialization underlying We[illegible]tern society. Above all, however, it embodies an attempt to universalize the process from which the Western model evolved. In so doing, it cannot be presented as a principle of change, when it aims, with the acceptance of the third world, to reproduce the attractive model of the affluent societies. The latent finality is no longer an

intrinsic well-being, specific to the recipient communities, but well-being as demonstrated by the West. Change is then no longer the decisive objective, but an effect subsidiary to the reproduction process.

Thus one may speak without exaggeration of a deviation of development as well as of a failure, compared with its original conception. Even the successive reforms introduced in recent decades in the approach to development have done little to remedy the unsuitability of the concept to its object. The material achievements wrought by plans, programmes and projects constitute the concrete product of action fostered on the basis of an ideological abstraction.

In addition, the weight of resistance has rendered pointless the efforts to adapt an unwieldy concept. The effect of putting it into practice has simply been to harden the fringes of opposition between the preconceived Western model and a soil in which imitation can put down solid roots only by disturbing the environment and obstructing the formation of any definite orientation for its evolution. Thus the removal of a traditional context and the gestation of inarticulate mimetic traits lead to a development in which the initial fiction has eventually produced a materiality in search of an appropriate concept.

The concept of development owes so much to its methods of intervention that it has sometimes been confused with them and reduced to the fragmentary objectives assigned to planning. Yet, in its finality, the plan has a universal vocation. In practice, however, for reasons often inherent in the state of techniques and their inability to deal with the closely overlapping components of society in their totality, it is limited to the economic fields and social infrastructures.

As a result, the all-embracing vocation of the plan gives way to a sectoral approach, in which the regroupings never succeed in recreating the original entity. Yet a changing society cannot be conceived otherwise than in its totality. Even a specific and sporadic change, affecting one component, has inevitable repercussions on the whole and provokes a series of chain reactions which end only when other alterations take over. Because of this fundamental interdependence of the parts of a whole, a global vision is essential.

In observable reality, no relationship exists in isolation and, although it may seem more convenient to study a relationship by removing it from its context, the resulting findings are valid only in relation to the totality in which it occurs.

The object of development is the transformation of a social set. This implies a dynamic approach, encompassing both global changes and those attributable to the elements of the set. What matters is not the elements, but their original nature and, essentially, the relation which exist between them. In fact, it is pointless to define one element <u>per se</u> - pointless and probably impossible, since any element is defined only as a function of the other elements which co-determine it.

It is from this relation set, with its obvious coherence, that the concept of structure takes shape. This is also the centre of spontaneous or induced transformation. Development thus appears essentially as a structural change.

It will be noted that this is definitely a formal process, whose definition is devoid of any value content. It is not enough, however, to identify the process after the event, as a phenomenon absolutely independent of human will, as a natural event arising by chance. Since initially development was identified with an

ideological concept, charged in its content with the values of progress and well-being, it is not possible to insert any phenomenon of change whatsoever into the development process. This is a deliberate process. It is the result of a decision to change, prior to the change, and as a process it is directed. This direction given to change implies precisely the setting of objectives and the instrument to attain them is the plan, accompanied by strategies to achieve the norms established by the plan.

In addition, development must have a certain degree of permanence as regards its effects. Changes lead to other changes, which will prevent any return to the starting-point. These chain reactions determine an irreversible process maintained by individual wishes. It is the awareness of structural change, measured by a common perception, which will accentuate its effects through participation in them.

This phenomenon of collective acceptance constitutes an essential element of the progressive character of development. Only if the populations concerned by the transformation are aware of it, and accept it wholly or partially, can the alterations become effective. This is illustrated by numerous projects which misfire, although technically their design and implementation seem irreproachable. No sooner are they launched than these projects lose all momentum and founder in the indifference of the beneficiaries who, for whatever reason, finally neither appreciated their scope nor understood their direction.

The following definition of development will therefore be proposed:

> "Development is a structural change and an irreversible process, which is willed and sustained by the participation of the populations concerned by it".

A definition of this kind thus tries to avoid any value judgements on the aims pursued and to describe, at the highest level of abstraction, a process reduced to its form.

Three essential corollaries of this definition remain to be elucidated.

There is growing acceptance of the idea that social or economic ideas may differ from one region to another. Because this is a truism, insufficient attention has undoubtedly been paid to the amount of resistance generated by tenacious cultures, which are primarily responsible for the failure of many development projects. It therefore seems essential for a definition of development to include, even implicitly, a reference to the cultural context, as the medium for the acceptance or rejection of all interventions designed to modify the physical and human environment. However, by stating as a basic prerequisite for development that structural change must be willed, one necessarily appeals to the system of values, since it underlies all expressions of will. A population can give its acceptance to an undertaking only on the basis of individual and collective values, which are intimately linked and which determine its approach. If the external phenomenon, which is thus the object of perception, clashes with the system of the individuals concerned by it, it will not succeed in becoming integrated in that system. The inevitable result will be a refusal on the part of the populations, which will obstruct the process or divert it from its course. On the other hand, if development is perceived without reluctance, it is likely to provoke other coherent transformations, thanks to the participation of the community, which both judges and is involved in the process.

This pattern suggests, as a corollary to the definition, another proposition of broader scope.

We have seen that any action which offends the receptive will of the populations will fail to mobilize the efforts which are the vehicle for change. But if the promoters persist and strive to impose the continuation of the process artificially, either by an act of authority or by increased recourse to technology, the attempt can only provoke a hardening of attitudes. Indifference will give way to opposition which, instead of putting a brake on all subsequent development, will actually halt it. Thus coercion inevitably causes development to fail. Too often, under the pretext of development, contemporary society has weakened the values of political democracy, forgetting that it provided the favourable context for industrial progress and allowed its model to thrive. Any use of force, whether or not it is presented under the banner of progress, carries in itself the contradiction of development, because it tries to crystallize a situation or a process and works only to maintain and preserve a de facto situation and not to encourage change. This is why development, through all the misconceptions to which it may have given rise and despite its dubious origins, is inseparable from the subject of human rights. It cannot be forced. It is, above all, a process of acceptance.

Lastly, any error affects the environment by upsetting it or modifying its structures, without thereby provoking development. This irreversibility of development, and indeed of all structural changes, emphasizes the responsible nature of any intervention, which ultimately concerns human beings, even if they too often remain in the background of concerns.

D. Population-development relationships

A study of the relationship between population and development in fact leads to a discovery of the links which exist between them, in the structural set of societies. In this pair, what matters is to determine the level at which the two concepts may find themselves in interaction.

It has been seen that development is a process which affects a global structure in a given environment. Demographic variables should therefore be considered also to be involved to varying degrees in change and comprised in the structural transformation, when they are not themselves the motive force. The links are thus apparent between a sub-system and the system of which it is a part, through the intermediary of elementary variables whose interdependence determines the network of interrelationships.

Emphasis should be placed on, firstly, the relationships of the sub-system composed of demographic variables with the set and, secondly, the elementary bonds from variable to variable, within the system. In this regard, reference will be made to technical interconnections between population and development.

At a second level of acceptance of the population-development pair, demographic variables, which were absent from the plan, are reintroduced into the set of key elements, objects of growth and vehicles of development.

The favour enjoyed by the plan among decision-making organs and sometimes among the general public seems to be due to the creation of a framework of security

for the present and the projection of this framework into the future, in the same rationalized temporal continuum. In other words, the point is to organize the present in relation to a desired future. Contemporary planning has two major characteristics: firstly, its political destination, concealed under a technical process, and, secondly, its inherent contradiction, making it at the same time the promoter and the custodian of change.

Planning, subordinate to the objectives of the authorities, projects them into the future. In this way, it is the vehicle for political choice and tends to ensure its permanence.

By its very existence, however, and the scientific intention behind its formulation, the plan also acts as a self-limitation on the cyclical arbitrariness of political choice. By determining the long-term goals to be attained, and the strategies for doing so, the plan limits the sphere of action of political choice. It thus promotes the institutional permanence of those who manage the State, at the expense of the political decision-makers, who are vulnerable to circumstantial fluctuations.

As an instrument designed to direct and control modifications of the context, planning takes the form of a set of techniques conceived for the purpose of objectivizing the authorities' decisions, on which they confer a legitimacy, a duration and a limitation over the course of time.

However, the plan investigates the past and not the future. It merely decrees what this future will be, if there are no major perturbations. As a result, it is largely based on, and will therefore remain subordinate to, models whose correspondence to past and present reality depends on the degree of sophistication of the available techniques and statistical information. These represent the effective limit of planning.

Since the plan is based on a socio-economic model, which attempts to espouse reality, it will be unsuitable, if the social aspect excludes demographic variables from the outset. It is therefore as a function of the model underlying planning that population will and should be granted recognition in development efforts.

We are considering here the third level of insertion of population in development strategies. It will be recalled that the term "population policy" was broadly endorsed at the 1974 World Population Conference, thanks to the World Plan of Action. The official appearance of the term marks an awareness among government leaders that it is possible to organize the population masses as regards their future, in a particular territory.

This policy will be the result of concerted action at the level of the State, that active abstraction which is increasingly determined to manage the whole range of social phenomena. But how to describe this policy, in the spectrum of Government decisions?

A definition of policy should undoubtedly specify what it proposes to do: not its intrinsic objectives, or its justification, but its sphere of application, in descriptive terms. At a high level of formal generalization, population policies could be identified with "the guided redistribution of populations in time and space". In other words, if it is desired to stress the normative aspect, the assigned objective will be "to influence systematically the evolution of

demographic structure through the control, if possible simultaneous, of its dynamic terms: natality, mortality and migration".

Above all, it must be considered that a policy represents a set of coherent decisions, designed to influence the evolution of a particular context in the light of definite objectives, whether or not these are disclosed. To separate a policy from its intentionality and from any direction would be tantamount to denying it and reducing it to some kind of impromptu intervention, generally characterized by an absence of policy. It therefore forms a whole whose deliberate coherence in the light of its objectives becomes a major element. The question whether it is sufficiently coherent is related to the subject of efficiency or consistency. What matters above all is the intention to articulate the measures to be taken in terms of intermediate objectives. Nor is it possible to imagine a policy without goals.

We can thus speak of a population policy in connection with the effects contingent upon an economic policy, for example, which deliberately ignores its demographic impact. Yet accidental secondary effects do indeed modify the evolution of demographic structures, but this result is neither anticipated nor induced, even if it eventually proves beneficial. However, the result may also be harmful to the initial intention. Thus a policy is defined as a function of the whole. If it is incorporated in the development process, which moreover will always provide it with an explicit cover, it will acquire its identity in terms of the finality assigned to development, whose very nature involves ethical intentionality.

Contrary to what occurs with development, one can thus imagine a population policy which is negative in relation to its object - for example, limitation of births by raising the age at marriage, in a developed country, as part of an effort to reduce unemployment - but whose harmful effect at the demographic level is justified in the light of the development of the community as a whole.

Thus the originality of the concept of population policy lies in the fact that it is not conceived as an autonomous notion. Its formulation is dominated by the concept of development, whose influence may have been obscured in the course of demographic disputes but which constitutes the ultimate criterion for its identification. From the outset, population policy implicitly involves the problem of its integration into development, from which it is inseparable. It takes the form of a development strategy, rather than an independent policy.

The insertion of demographic variables in the plan or the integration of population policies in development are two facets of the same phenomenon whereby demography is restored to the changing social system. In practice, the formulation of population policy will, if it is to be sound, take place within the framework of development policy and be motivated by the relations between demographic variables and socio-economic variables.

E. Integration of population variables

Definition of the demographic domain in terms of variables, which express quantitatively the key elements of a population, proves much more puzzling than it would seem from the simple definition of the concept of population.

It is the work of prior selection, involving significant criteria and properties, which will lay the foundations of a system for a given homogeneous space. This space is understood as a zone of coherence in relation to the variables adopted, but which are chosen concomitantly as a function of their articulations in this space. The comparison of the elements and the analysis of their relationships should make it possible to identify the system in its structural evolution and subsequently to partition it into a sub-system. In order to do so, it will be necessary to locate the endogenous variables, which involves exploration of the meanings of the linkages between the elements. But the endogenous variables influence each other and it is from these interdependences, combined with the effects of exogenous variables, that the structural network of the system emerges. This is considered to be the global model of the phenomenon observed.

We see that, contrary to a too common practice, there is no automatic mechanism producing a set of prescriptions for grasping a real phenomenon. It is admittedly possible to envisage the stages of a formal procedure, but this does not preclude the effort of reflection to adapt the methods to the local situation. It is not only the conditions of infrastructures that change from one place to another, like the availability of statistical data, but the existence of relations which dominate in one place and play only a minor role elsewhere. Often entire sub-systems fail to constitute themselves, because of a lack of articulation.

The inclusion of demographic variables in the plan does not occur surreptitiously or at random. Apart from a preliminary vision of the overall interdependences, there can be no room for sterile dissection. Here too, knowledge necessarily precedes action. The study of a distinct relation is reprehensible only if it is not first situated in relation to the system as a whole and if there is no incidental judgement of its relative importance, before the details of its behaviour are considered.

Lastly, in an area which is constantly changing, a relation is never definitively defined. It may very well, with the passage of time or depending on the place, diminish to the point of disappearing or alter its nature as a result of the appearance of new connections.

The relations between demographic variables and socio-economic variables has been studied in order to consider the nature of these relations (Fabri, 1977 and 1980). Covering about a hundred countries of all kinds and three chronological reference points (1960-1965-1970), this study considers 43 variables, which are presumed to characterize demographic, social and economic structures, which the study attempts to identify. It takes as an initial hypothesis, firstly, the global aspect of development and, secondly, the diversity of structures depending on the contexts of time and space.

As a first stage, an attempt is made to identify, on the basis of the variables selected, zones of homogeneity in order to reveal structural differences and at the same time to find some coherence in them. In the second stage, an attempt is made to decipher these structures by determining the meaning of the interrelationships. One of the major conclusions of this study is that the basic demographic variables are highly endogenous. They have relatively little influence with regard to those to which they are subject. This emphasizes, if there were need to do so, the fundamental character of the population sub-system.

II. FORM AND CONTENT OF COURSES

A. Justification for and form of courses

Through decades of direct involvement in developing countries, experts from the developed world greatly contributed to the dissemination of socio-economic models, placing emphasis primarily on the economic side and forgetting that they were actually introducing essentially cultural models in areas where other values reigned supreme. While their activities had lapsed into a humdrum routine, mutterings of irritation began to be heard in the third-world countries, which did not know where to turn in order to find a way out of the deadlock, in their eagerness to fulfil their desire to determine their own destiny. The realization that they had surrendered to others the responsibility for solving their own development problems made them feel the need finally to take charge of operations, even at the risk of impairing their effectiveness. It was becoming imperative for those countries, without repudiating external technical inputs, to lay the foundations for genuine co-operation that would permit development to deviate from a set course and follow a path reflecting the distinctive environment of those countries, with man being restored to the rightful place from which he had been removed.

Each day there is an ever-clearer awareness that development is not born of technology alone, but that its roots spring from the intrinsic cultural values of a society which has become flexible but non-committal. Who then can still speak of rigidity in a world which bears the scars of all the blows it has sustained, where the only form of resistance is to promote a vacuum?

Hesitation, reluctance, the fear of abandonment and the fear of depleted resources are among the various obstacles to the assumption of responsibilities by national authorities. But there is also the question of what the approach to resources should be. What is the impact of the application of the technologies learned? How can one go it alone and take initiatives?

It has been said that there are no recipes for development. Whoever attempts to leave his mark on development does so against his better judgement. Development takes many forms depending on the context. It is therefore important to identify activities which will combine in a coherent mix and produce the desired changes, or, to put it another way, activities which will usher in and orchestrate those changes in order to bring about the desired effects. Accordingly, no development is possible without a prior understanding of the specific context in which action is to be taken. Since each situation is unique, the scope of practical action is locally defined.

In their desire for pragmatic autonomy in order to promote development, national policy-makers and experts come up against the problem of the precarious availability of resources - material resources no doubt, but primarily signs of original thought in tackling the issues with all their special characteristics. As far as education is concerned, the after-effects of colonialism fostered, particularly in Africa, the cultural centralism of the former parent State. The practice of sending students to the centres of Western civilization for technical training accentuated the gap between skills based on the needs of the developed world and the tools indispensable for a full understanding of the development phenomenon in the respective countries.

Moreover, such academic baggage encourages factiousness and divisiveness in a world of learning isolated by a high level of sophistication. Added to this is the frustration experienced in the professional life of an individual who is a qualified university graduate but who can find no outlet for his skills in a native environment unable to absorb them because of the disparity between the general standard of expertise and the level of specialization attained by the individual.

This educational wastage suggests that there is a need for training which, without denying the benefits of the skills acquired, would integrate them into a system of interdisciplinary co-ordination capable of dealing more effectively with the various problems of development. This process begins with the recognition of the distinctive national environment, which must be understood if it is to be modified.

The sectoral division of bureaucracies, often copied from their Western models, has led to administrative compartmentalization that is not conducive to co-ordinated action and has not been made less rigid, let alone eliminated, by the relatively recent establishment of central planning agencies. Accordingly, co-ordination more often than not means multidisciplinary consultations, which, within the framework of the ever-growing number of interministerial commissions, highlight disputes in which each side tries to make its views prevail. A commission which fails in its purpose will beget a more specialized committee, which in turn will propose a small working group - the ultimate rejection of the goal of co-ordination. Thus it has become clear that one of the preliminaries to all development planning by national authorities should be the building up of a corps of co-ordinators capable of conveying a synoptic vision compatible with that which should guide the planning process. With the awareness of population components as an indispensable ingredient in planning, there is the feeling that such co-ordination could be achieved by incorporating population elements in the planning process. Since a primary system is involved here, it could institute a common language for various sectors, such as education, health, labour and agriculture.

As we saw earlier, the direct corollary of the recognition of the demographic phenomenon has been the formulation of population policies that would give development plans new options and a more realistic orientation. One can hardly expect the formulation of such policies and the concomitant strategies to be left to the narrow confines of a single specialization or to the confusion of a multidisciplinary debate, at a time when everything points to the development of an interdisciplinary approach in accordance with a specific reality that ignores the gimmickry of the academic disciplines.

It therefore appears necessary to see about training a new corps of officials who would be assigned to the planning sector but would be able to reach out to other sectors and, on the basis of population phenomena, would co-ordinate the various aspects of sectoral activities.

Only if there are professionals capable of holding their technical expertise in reserve with a view to better integrating it into the global vision of development will it be possible to take into account the various structural components which are usually dealt with piecemeal.

To that end, it is important to modify radically the disciplinary approach to development. The term "expert" adequately reflects the technical spirit in which

programmes of assistance to third world countries were instituted. The method of beginning with problems as posed by a given situation naturally highlights the diversity of the disciplinary systems involved and, in the face of the intractability of the disciplinary debate, is an argument for the interdisciplinary approach.

Despite difficulties in communication, the need for such an approach, which still retains the marks of the established disciplinary order, has made itself felt during the solution of practical problems posed by development, although, as far as one knows, it has failed to generate any specific fruitful experiments, with the exception of those carried out at the UN-Romanian Demographic Centre (CEDOR).

At the same time, it is in the scientific field that systematic research, dictated by the requirements of a method of synthesis, has no doubt been most in evidence. It is also there that the imperatives of research have led to more exemplary developments. With regard to the tools used, an initial interpenetration among the various subject areas was achieved in most of the scientific disciplines with the introduction of quantitative methods. However, the fact that the use of some methods has been extended from the original field to other fields does not necessarily mean interdisciplinary solidarity. Thus the application of mathematical formalism and the tool of statistics in economics, for example, has not automatically opened econometrics to sociological inputs. In the physical analysis of biological events, demography has long remained a closed area of increasingly sophisticated statistics as it resorted to quantitative methods, themselves more sophisticated.

Nevertheless, there is a new tendency to set against empiricism, which isolates the significant elements, the concept of "models", which sacrifices "veridical" details in order to restore a more coherent overview of reality without any of the distortions to understanding caused by the traditional, mutually independent disciplines. Rather than through a common language, it is through the method of synthesis, which creates structured realities, that the tools of action-oriented know-how are produced. While this approach excludes determinist models, which seek to force reality into their rational moulds, too often implicitly considered objective, it gives priority to the conceptual model, which seeks to restore reality and is flexible enough to permit a process of constant enhancement that increasingly focuses on a dynamic reality.

Interdisciplinarity then becomes a specific approach, within traditional disciplines, to the objects under study. In demography, for example, the subject of fertility provides a good illustration of the disciplinary interconnections in evidence. Depending on the approach favoured, this subject may have psychological, sociological, economic, juridical or other implications; in addition to the interdisciplinary exchanges which it generates, it opens the door to, and constitutes the unifying element of, the method of synthesis on a broader scale.

However, the resulting integration of specific approaches poses certain problems which have to do with interdisciplinarity and provide it with a theoretical framework. One problem relates to the conditions governing the process of synthesis, which seeks to express in cognitive terms the manifold aspects of reality. In this connection, it would be wrong to believe that a given reality, so dear to empiricists, is involved here. A fully restored object remains a construction; no doubt it is closer to the original, but it has been produced from selected elements. Although the most rigid form of positivism itself runs into the

problem of interpreting observations, the observer/observed relationship and the choice of specific elements still leave considerable room for subjectivism.

The fact that interdisciplinarity increases subjective indetermination does not mean that the information is slanted, unless the determinism of all things was previously postulated, which is a way of favouring one approach to the exclusion of all others. It poses dangers in interpretation only in so far as specitic approaches are incompatible and maintain the distortions inherited from the traditional disciplines that will prevail during the study of phenomena.

The interdisciplinarity in the process of synthesis suggests an analogy with a system whose elements are the disciplines themselves and whose structure is composed of the interconnections between the disciplines.

Another problem relates to what may be considered to be an essential instrument of interdisciplinarity. A partial redefinition of interdisciplinarity may be made on the basis of the elements it involves; it may be suggested that interdisciplinarity acts out the analogy, which serves as an intermediary between established disciplines. Despite the dangers of the imprudent use, not to say abuse, of the analogy, it appears impossible to separate this concept of interdisciplinarity from its productive application. We have already pointed to the importance of a unitary vision of man, with the new lease of life being enjoyed by the interdisciplinary approach; this inductive approach was able to have an impact only because of the prior cross-fertilization. But the objective is to bring out neither the benefits of the transposition of concepts, although such benefits are not negligible, nor the benefits, no doubt more discredited, of functional or organic analogies, so dear to sociologists of the last century, but rather the benefits of structural analogies, which are best suited to the needs of interdisciplinarity in the process of synthesis. The term "model" usually implies an analogical approach. The analogy is generally expressed through the transposition, to a more poorly defined area, of the model relating to a better known phenomenon. This movement from a better defined area of understanding to a hazier region underscores the heuristic role of the model and, accordingly, of interdisciplinarity.

Lastly, it is in research that the interdisciplinary option has its full impact. With a research subject the approach cannot be predetermined. It depends initially on the subject to be studied or on the subject as defined for the study of a broader phenomenon. For example, in the study of a community considered homogeneous, in the context of a spatial reallocation of the factors of development, the family, or its statistical counterpart, the household, may very well be chosen as the subject of research. It is on the family, considered a significant element, representative of the collective dynamics, that research activity will focus. But the focus could have been on the village or on any other well-defined community. The simple definition of the family in a specific and limited area and at a specific moment brings into play a set of linkages that take little account of conventions within disciplines. Obviously a faithful model of reality cannot be obtained through successive analyses according to the initially juridical factors which bring the family as such within the purview of administrative and statistical entities whose concerns are perhaps far removed from the question of representativeness of communities. The next phase might involve a functional or structuralist anthropological approach, which would feature the cultural and historical dimensions of the family and situate it within the social unit. Demographic analysis would then bring out trends in reproduction and

attrition, which could later point to a particular pattern of behaviour or a unique structure. Lastly, it will be possible to identify the ways in which the family is integrated into the community under consideration by focusing on its economic role within a group categorized according to new criteria, such as the occupation of spouses, their socio-economic status, their level or source of income, or the purposes for which income is spent.

It is unlikely, however, that the juxtaposition of these different approaches, each of which brings out the unity of the study from a different angle, can ever produce a model true to the original. It is therefore less important to describe the components of the whole than their mutual relationship in terms of the context of the relationship. The compartmentalization created by experts does not affect this relationship; it exists notwithstanding the compartments erected. Thus the major objective of interdisciplinarity is to study the relationship, preferably its basic components. This is not an explanatory, but a descriptive method, which, in order to produce a definition of the subject, cannot ignore the partly explanatory relationships of the whole. It is the complexity of the "reality" being analysed that dictates the adoption of the methodological approach.

How then can these proposals be systematically reflected in the courses?

B. The curriculum

If one admits that the purpose of population and development courses is to train planning co-ordinators on the basis of integrated population policies and if one is mindful of the great diversity of forums of application, particularly in terms of culture and environment, one can design a curriculum which seeks to meet those two criteria within the framework of an interdisciplinary approach.

In giving a more concrete manifestation of the characteristics of interdisciplinarity, this design process would nevertheless run into the problem of the choice of topics; again the combination of those topics would not reconstitute the structural whole. Unless the curriculum is limited to a single course, which, given the present state of the art, would be a chaotic and vast expanse of unintelligible magma, one should build bridges between the traditionally accepted subjects and make frequent cross-references. It would thus be possible to underscore their interdependence, while widely promoting something which, to a greater extent than learning, reflects the success of teaching, namely, a mental preparedness to tackle the problems posed simultaneously at various levels of the interrelationship between the most salient features of the social complex. The idea is therefore not to provide methodology in the form of recipes, but to help in the identification and understanding of the structures particular to each environment studied, in order to be in a position to determine the strategic options and their implications for the solution of development problems in their global context, or, more generally, to initiate development. Such being the case, it is to be expected that solutions will emerge only after the next two major phases: the understanding and the directional change of the context.

Thus the curriculum, in order to be coherent, should follow the logic of the approach. Consisting of disciplines of the traditional type, this curriculum has two main lines of focus, which correspond in modular form to the two aforementioned phases. One has to do with the understanding of the context, the aim being to dispense the rudiments of theoretical and diversified knowledge, which, while

providing a frame of reference, must also furnish the elements needed to stimulate reflection, in the specific context of the country, on the mechanics of a policy suited to that context. Cultural concerns remain prominent here. The other line of focus has to do with the available means of action in relation to the concept of planning. But it is primarily in terms of strategies, corresponding to explicit transitional goals, that those means should be explored in relation to the context identified.

These two lines of focus are reflected in the demographic approach, which is present at each stage of instruction in the respective disciplines; they lead to the more systematic study of subjects where there is evidence of the concern to relate population aspects to socio-economic factors. This approach poses the problem of integration, but within a practical framework involving procedures for implementation through planning, which is still considered to be the best vehicle and the best strategic instrument for giving tangible expression to the constant interaction between the situation to be changed and the implements of change.

Lastly, the technical substance derived from the interdisciplinary approach is dispensed in the form of an inventory of resources available for the solution of problems of application. Although this set of courses appears marginal to the two baseline models, the courses are subject to constraints imposed by the need to tailor them specifically to groups of problems posed by the concrete situation. It is with that in view that it is important to show the benefits and limitations of the proposed techniques which have been developed because of the need to resolve specific cases. Hence the importance of defining at the outset the limited scope of application and of justifying the use of any given method geared to the solution of practical problems. The point is to highlight the subordination of methodology to the treatment of real phenomena analysed under the two main lines of focus. We will then demonstrate the mechanism of the proposed techniques and their theoretical foundations in order to draw attention to their suitability (and therefore their effectiveness) for the particular application made.

It should be noted here that, in the context of the curriculum, the in-depth study of subject-matter and the mastery of techniques are beside the point, because this exercise has to do not with developing skills in statistics or mathematics, but with providing information on the range of available tools for more specific use in the field at a later stage. The objective of these courses is above all to furnish the elements for a choice of methodology on the basis of an understanding of the tools, and not to lead to the use of formal techniques for the development of models or for control.

Lastly, it is important to create awareness of the dynamic interdependence which, as a dominant theme in the curriculum, will highlight its major principles and conceptual basis. This process of synthesis will be a sort of introduction to the curriculum itself so as to alert the student to the coherence of the relationship between population and development.

At the same time, it is considered essential to synthesize, at the end of the day, the theoretical and technical material provided, viewing it in terms of its application. Essentially the curriculum will consist of two areas, one systematically recapitulating the subject of the courses, i.e., population policy, the other covering the identification, formulation and appraisal of development projects with demographic components. This would be a specific and partial integration of population policies through the direct application of the strategies

in the respective contexts. That is the essentially practical outcome which such a curriculum should have. And this is how the necessary movement from the abstract to the concrete is made. Concurrently with the interdisciplinary approach, a broader plan reflects the complementarity between the conceptual framework and the practice of development.

III. ORIENTATION OF THE COURSES

The complexity of the tasks involved in development and the difficulty of viewing development in its totality provide ample justification for a training programme to create the infrastructure for development in the form of human resources. But where is one to find the people to make up the professional corps capable of approaching and tackling the many aspects of the problem? Despite obvious gaps which they are striving to fill gradually, third world countries, in varying degrees, have the necessary skills to manage socio-economic development plans. These skills certainly come under a variety of disciplines which all have a contribution to make, in their specific fields, to the formulation and introduction of policies. It is quite obviously from this reserve of skilled personnel that candidates for the training programme will be drawn. It is also on the basis of what skills are available and how they have been used within the institutional framework of a country that an attempt will be made to give the curriculum the orientation that will make it functional.

If, as we have determined, the aim is to turn out planning co-ordinators capable of formulating integrated population policies, it should first be noted that the organization charts of national civil services make no provision for such officials. The fact is, however, that this type of course is not tailored to the post of co-ordinator; its basic aim, at most, is to make all personnel involved in planning activities responsible for and mindful of the components of planning, and thus to start a dialogue on the basis of population questions common to the bureaucracy as a whole. The extent to which co-ordination is essential will no doubt depend on the functional level of the respective officials. Clearly those responsible for policy formulation must have a far broader view of the elements and context of planning than, for example, a computing clerk performing specific technical tasks or an agricultural expert employed under a project. Which is not to say that the various categories of staff should be excluded from population concerns - far from it. But the curriculum designed for them must take into consideration their position in the concerted planning effort.

At the same time, the nature of the respective skills poses for a training programme based on a process of synthesis certain difficulties which should be borne in mind when the curriculum is being designed. Thus, because of their initial training, statisticians, for example, will require a different course module from that offered to planning economists. A number of academic disciplines come into play both when a plan is conceived and when it is developed. Each discipline is supposed to make a contribution not by means of specific inputs, as normally happens, but by becoming an integral part of the whole operation. A single specialization would be insufficient. At the same time, tailoring curricula to each category of officials or each academic specialization is out of the question. It will therefore be necessary to work out a compromise between unrealistic individual courses and the general curriculum. The compromise should be geared to the norm, with due regard for the levels of responsibility in the implementation of political decisions and the university education received. In the final analysis, it is the pragmatic objective of the curriculum that should determine its direction in terms of form and content.

With regard to planning, project-formulation activities are not the only ones that must have a demographic perspective. Before any design process begins at the purely political level, it is undesirable for the person responsible for giving political direction and taking decisions to be trapped by a narrow and distorted

view of the situation. On the contrary, he must be able to draw on the widest possible range of information, particularly information relating to the position of population questions in the planning process.

At the same time, this type of information must be broadly disseminated among the general public by the media, which should give a detailed account of the components of the planning process so as to prepare the ground for its acceptance. It is clear that in the two cases last mentioned, the consciousness-raising operation differs substantially from the somewhat formal courses proposed for two academic years under a coherent curriculum designed to familiarize planners with the population-development connection.

Particular options, which should take into account the objective and the educational infrastructure, should therefore be offered to each category of staff. The extent to which officials will have access to the training available will probably also have to be considered. The higher the post held by an official, the more compelling his obligations and the less time he will have for retraining. Formulas should therefore be sought in response to the diversity of situations, with those deserving special treatment being identified. The focus should certainly be on officials at the highest level of the hierarchy, for they will determine whether the climate is conducive to the training of middle-level staff. The curriculum must itself be based on policy and promote adequate strategies so as to improve its chances not only for credibility, but also - and this is essential in any educational process - for continuity.

To that end, one should first analyse the problem on the basis of the given occupational range, in other words, the pool of skills in the broad framework of the planning process; that pool constitutes the reserve of potential recruits for the education drive in the area of demography, the initial phase in dealing with the relationship between population and development. It will be less important to consider the academic credentials required for planning activities than the resources usually available as far as skills are concerned. It goes without saying that the most frequent types of training in these areas are complementary with regard to the tasks to be performed. It is therefore not so much the diversity of academic skills available as their complementarity on which attention should be focused in the design of the curriculum, if it is to have any chance of making the expected impact.

If one is dealing with university graduates, at what is considered the most appropriate level for the study of the interrelated subjects in the area of development and for the desired change in perspective, the specialists most frequently found among staff responsible for planning are as follows:

(a) Economists, with or without post-graduate training in planning;

(b) Statisticians;

(c) Geographers;

(d) Demographers;

(e) Agronomists;

(f) Sociologists, in the broad sense of the term, including, for example, town planners, often architects by training, as well as holders of first degrees and doctorates in law. The sociologist is thus defined in terms of how he will use his academic assets in the planning process.

These categories of specializations are those that are most often found in areas related to planning and must be taken into account in any attempt to design a realistic curriculum. Although certain skills, either because of the purpose for which they were acquired, as in the case of statistics, or because of their application to the various activities in the public sector, prepare the ground for interdisciplinary activities, it must be admitted that, on the whole, the fields of study are well defined and, while complementary, place more emphasis on differences than on similarities. The curriculum will take account of this range of professional skills. It should be pointed out here that any reference to the curriculum is in relation to the basic proposal; its major principles are described above and it is supposed to represent the ideal model. The pages below deal with the changes affecting the conditions which the curriculum will encounter.

It is hardly surprising that activities strongly influenced by an economic bias should be carried out primarily by economists. The original and virtually exclusive orientation of planning makes economics the corner-stone of development. In the specific case which concerns us, it is this prevailing orientation that makes it even more necessary to broaden horizons and introduce demographic elements with a view to changing the line of perspective and opening up a range of new prospects. Also in this connection, statisticians, the almost exclusive purveyors of quantified material, make up a relatively homogeneous group, but usually do not have even a smattering of economics. When they were taught the rudiments of economics, they had, at best, subsidiary courses, long since forgotten. There is in addition, primarily in French-speaking Africa, an over-abundance of geographers, committed to a vision of development which focuses on spatial aspects and sets the tone in local official circles, in competition with the abstract approach of sectoral planning. Although they are hardly quantitative theorists and are seldom abreast of economic methods, geographers bring into specific areas economic concerns that are almost always absent from development plans.

One can appreciate from the outset the inevitable complications in the preparation of a general curriculum. It will be difficult to deal effectively with the heterogeneous nature of the participants, unless specific models are designed for the basic training programmes and unless supplementary or refresher courses are offered as the first step in an effort to make the various training programmes compatible. It will be impossible to develop the curriculum unless basic deficiencies are made good and a common language is introduced at least on the surface. It is therefore advisable to include a minimum of general subjects (in addition to demography, which will be mandatory), primarily economics and statistics, so as to enable all the students to follow the programme profitably. These standardization courses, though elective, will be mandatory depending on the shortcomings which become obvious and will have the merit of sparing individuals from over-expending their energy, which would ultimately be detrimental to the essence of the curriculum. This preliminary step becomes an imperative necessity if the aim is to maintain the coherence of the curriculum and enhance its effectiveness. The utilitarian nature of those additional subjects is therefore worth stressing. In this initial phase, course content will be confined to basic elements that are indispensable for a subsequent understanding of the presentations.

In the final analysis, however, what really has an impact on the orientation of the curriculum is not so much the academic background of the candidates as the professional activities in which they are engaged in their respective departments. This brings us back to the operational process of project execution and to the allocation of tasks in terms of the professional resources required for successful performance. It is primarily to occupational groups that the curriculum should be geared, not to a rational model. In its design, the curriculum should fall in line with the administrative practice of third world countries, even if such practice is known to be deficient. At the same time, going into the details of local divergencies is out of the question, for that would lead to a fragmentation of the courses, thus again jeopardizing its universality. We will therefore identify a number of "functional" categories so as to determine to what extent and in what circumstances an adapted or special curriculum would be warranted.

A. Senior management

We have already had occasion to tackle the question in this paper. Among the reasons for separating decision-making power from executive power, there is one reason which has to do specifically with the proposed approach to instruction on the relationship between population and development. To be sure, it is rather pointless, in the context of political decision-making, to introduce elements of know-how which, because of the predilection for detail, would merely slow the momentum of prime movers. At this level, on the other hand, one could hardly dispense with a holistic view of the social situation and of the proposed changes to that situation.

But, in addition to this understanding of the entire situation which politicians must have, what matters, in terms of motivations related to objectives and to constraints that are often alien to development itself, is to create an atmosphere receptive to change and to the building up of an appropriate institutional framework. Indeed if those in the upper echelons of the hierarchy are unresponsive to population concerns, how can middle-level staff be expected to win acceptance for their point of view in the face of the established routine and the lack of understanding, assuming that they are convinced of the interdependence between and within structures? How would they even have access to appropriate training if such training clashes with the convictions of their superiors?

That is why it is indispensable to concentrate on educating the highest levels of the administrative hierarchy. It is only in this way that the population component will have any chance of being considered a natural ingredient in plans and projects emerging for the most part from the political sector.

The fact that what is desirable is justifiable does not automatically make it realistic. It must be admitted that with all the sundry demands made on them, policy-makers scarcely have the time or the inclination to return to a class-room setting, or merely an educational environment, which, in addition, would detract from the prestige attached to their responsibilities. It is easier, however, to envisage a format involving debate, discussion and the sharing of experiences as a more likely conduit for the information to be conveyed. What we have in mind here is a flexible schedule: in the course of a calendar year, two sessions, neither lasting more than two weeks; not more than two hours a day; a mixed lecture/discussion format available locally to small groups. For practical reasons, non-local organizers and participants will be able to combine their

seminar activities with the concurrent organization of in-house courses for other categories of staff. In this connection, we will see later how a series of co-ordinated programmes can be developed to meet local needs.

What will be the content of these seminars? The importance of a global approach that reconciles sectoral approaches and provides for the inclusion of population among development components could serve as a starting point for discussions. In addition, there should be an attempt to forecast future trends in order to introduce a dimension which is consistent with the scope of the planning process and defines the practical scope of planning that is subject to the imperatives of the political sector. At the same time, participants could be introduced to the rudiments of theories of decision-making, which could provide a practical framework for what they are doing, while ensuring that it remains relevant. That would make it easier to relate the pursuit of political aspirations to the reality of integrated population policies, in their proper cultural context. The overall aim is to stimulate reflection on ways in which development factors can be integrated into the cultural framework within which national leaders operate. Chapter V of this paper will seek to define the proposed content of the presentations. The door will be opened to the practical incorporation of demographic components in socio-economic development plans.

B. Middle-level staff

Middle-level staff are those who, on the basis of their technical skills, are responsible for implementing the decisions taken at the political level. Depending on their position in the hierarchy and as far as available resources permit, they enjoy some autonomy in choosing the strategies for meeting the targets set. In that respect, they are the administrators in the best position to ensure tangible national development.

Although in principle the courses are open to all, the curriculum was designed primarily for this category of staff, more specifically, for those who were promoted early in their career to positions of responsibility and can still spend time rounding off their training. The current practice is to send them abroad for further training after their first degree. They are thus supposed to become increasingly specialized in their field. But this, as everyone knows, is likely to put greater distance between them and the problems which they are being prepared to solve.

The solution of these problems does not lie in the greater sophistication of technical training.

Sooner or later it will be realized that the solution of the problems posed by specific situations should not be sought in increased technical training, but rather in the broadening of horizons. It so happens that a course curriculum for population and development can, by its very nature, adequately meet the imperatives of a comprehensive overview, while offering a practical outlet for the specific skills of middle-level staff. Separating the various skills is not the same as rejecting them. On the contrary, it helps one to tackle problems as a whole, the better to determine where to apply methods of solving them. The concerns remain basically pragmatic in nature.

The curriculum which is most likely to meet the requirements should be able to cover a two-year period so as to facilitate a thorough assimilation of concepts and methods. The schedule would call for the preparation of an original paper during the second year, which would afford the trainee an opportunity to show that he has digested the knowledge acquired. This is a movement to the realm of practice, a movement from the most abstract to the most concrete.

Among administrative staff, one group in particular merits attention, namely, population experts. Demographers have post-graduate training provided either at universities or at specialized centres established by the United Nations. Such training normally leads to a career at statistical institutes. The functions reserved for demographers, at that level, relate to censuses. For the most part, however, they have to do with the analysis of data gathered from censuses, from civil registers or from the results of sample surveys. They culminate in the preparation of population forecasts. But the contribution of the demographer to the planning process is not greater than that of the statistician; in other words, he supplies usable data. All the same, in the spirit of this exercise, such data should be gathered, analysed and processed in such a way as to permit them to be selectively integrated into the planning process. It is therefore very important that the material communicated should be selected on the basis of how it is to be used, not at random or according to a set publication schedule. This is possible only if the supplier of demographic data is not constrained by his methods and has a general picture of the significance of his contribution. He must therefore be aware of the purpose which his work will serve and he must ensure that his contribution is in harmony with the planning process.

It is necessary to build a bridge between statistics and planning. Demographic components constitute the foundations of such a bridge.

The aim will be to offer training to qualified demographers, not only in the special aspects of population-research techniques, but also in the relationship between communities and the society as a whole in terms of socio-economic variables. At the same time, turning the demographer into another planner is out of the question; his task is well defined and will keep him away from the planning process. It should be borne in mind too that it already takes two years at the post-graduate level to train demographers. They cannot therefore be expected to spend a further two years learning the dialectics of population and development. Because effectiveness is crucial here, a compromise is called for. It will be worked out as follows: instruction will be offered under a training programme for demographers; this additional training will justifiably be limited to two courses, one dealing with the establishment of a conceptual framework for interactions between demographic variables and socio-economic variables, the other dealing with the formulation and introduction of population policies in conjunction with the planning process. Although these are two complementary aspects of the same phenomenon, their separate treatment is justified by the situation in the administrative machinery, which separates them completely on account of the more technical concerns of one aspect and the political concerns governing the other. Accordingly, the links between population and social structures in the development process become an important element in the training of demographers.

C. Educators and researchers

In terms of the purely formal aspects, the related fields of education and scientific research do not require a fundamentally different curriculum from that designed for the planning process. Indeed, the area covered is the same. It is a fact, however, that both with regard to knowledge and with regard to application, there are vast regions to be explored. Thus there is ample justification for giving the researcher a place apart. His training is as important as that of the planner. Actually the difference lies not in the letter, but in the spirit of instruction, and for that reason deserves special consideration. Whereas the planner takes as his point of reference integration objectives which will of necessity lead to specific prospects, the scientist in principle is not subject to the same time constraints or to political directives. He can therefore have a privileged insight into the nature of the interrelationships and run fewer risks in subjecting them to a series of hypotheses, using the whole range of available methods, in a process of trial and error that is far less formidable than practical application. In the main, however, it is in the search for a deeper understanding of the context that research activity will come into play, and, at the end of the day, it is on such activity that the expert must logically rely in working out planning strategies. So even though the material appears identical at first glance, its treatment in each case is based on a different approach, which brings out the complementarity between research activity and application.

That is why it is considered essential to maintain a distinction between those two possible orientations of a single curriculum, if not of an identical training programme.

It is during the second year that emphasis will be placed on certain technical aspects related to data processing and the development of models, as well as on the formulation of research plans, whereas, for the other trainees, the emphasis will be more on strategies and their implementation. The distinction will be borne in mind when the trainees are writing their papers, which, in terms of the subject-matter and the methods used, should be in keeping with the functional goals for each of the groups.

It should also be noted that researchers and educators are not subject to the same time-frames as officials responsible for planning, which is by definition limited to the medium term. Timetables for planning are strictly determined by the schedule of pre-plan activities.

What therefore ditferentiates the two groups is the length of the time-frame which it is permissible or desirable for them to adopt.

Since research is supposed to provide a sound basis for action, it cannot be confined to a limited portion of time, but should preferably cover the historical period in which the general characteristics of research findings can become apparent. That is why greater emphasis will be placed here on all the historical phenomena which influence developing societies and help to explain the various aspects of the present. Lastly, the research findings will relieve planners from conducting their own research and tests in order to verify the premises on which planning is based. Planners will thus have a far more solid foundation for their forecasts than if they had had to lay it themselves at the expense of the priority tasks assigned to them. In this connection, therefore, it will be useful to put

emphasis on the historical dimensions, and on their relativity, in the specific training of educators and researchers in this area.

Not all educators, however, are active in the academic world. They are increasingly being called upon to make a contribution in the area of administrative activity itself or in the direct application of concepts. For example, there are the instructors whose responsibility is to prepare staff to perform specific tasks. It is felt that, in so doing, they serve to propagate incontrovertible knowledge, which is like dispensing formulas during a practical training course geared towards the performance of routine tasks. But in order to disseminate precise information of an indisputable nature, one should exercise the discernment that comes only from a thorough understanding of population and development problems. In such cases, the educator should reduce a complex subject to the rudiments that are useful for tackling the limited tasks assigned to his students. Without distorting the significance of those rudiments, he should make them accessible to his students.

The educator will thus be involved in a comprehensive training programme with a special orientation. During the second year, he will have to make a considerable effort to synthesize more specific aspects, such as regional development projects, as well as pedagogical aspects peculiar to the training of executing agents in the field.

One can see how important it is to have a curriculum covering two years. It is mainly during the second year that, because of the available options, it will be possible to put the trainees in different groups depending on the nature of the functions that will subsequently be assigned to them. It is easy to understand too why this type of training must be designed in co-operation with the national authorities, which will select candidates for the population and development course to suit their needs.

D. Executing agents

Although directives originate high up in the hierarchy and reflect in real terms policies formulated at the top, no concrete accomplishment could ever be realized in the absence of an action plan providing for a sequential set of tasks which involve a number of executing agents. The success of this exercise largely depends on how tasks are performed at the various levels of implementation. It is therefore important for staff responsible for the practical phase to be in a position to appreciate the full implications of their work and to be aware that they are working on a team. It is also important that their technical training should be appropriate for the analyses and partial reports requested of them.

The training that one would hope for at this level is not best offered in a long programme of study including a stay abroad, or through elaborate courses that are far too involved for the functions of participants. It is important, however, for such staff to be made aware of their professional contribution.

One can envisage the process of promoting awareness of population problems in development taking place during a short, in-house training programme. The few courses offered will preferably be tailored to work in progress. Thus the issues on which staff are working will serve as basic teaching material and provide a laboratory for the immediate testing of the precepts to be assimilated.

Yet experience has shown that courses held locally are hardly welcomed by local staff. The fact is that a short training programme requires participants to exert themselves without being rewarded by the chance to travel abroad or by the prospect of being promoted because they hold diplomas recognized by the authorities. The problem, then, is one of indifference on the part of staff, who, lacking motivation, too often lapse into absenteeism or, at best, into sterile passivity. Stimulating interest at that level of operation depends on the very organization of the courses, not on their substance. One can understand, however, the importance of this factor, which is likely to nullify the benefits of training. This has financial implications inasmuch as resources are wasted, sometimes in large amounts. Still, should it prove possible to interest staff in this type of training, it will be particularly effective if it relates to practical problems on the basis of work in progress and brings immediate returns.

This type of training programme should be set up in such a way as to provide for short sessions - two to three weeks - repeated at intervals that will depend on the activities which it will be supporting. The instructors' task will be to offer classes not only at the central administrative offices, but also at the regional level, keeping on the move. As to substance, the subject-matter will be concentrated in a general information course, the aim being to highlight the obvious relationship between population and other factors. This information course will be followed by presentations and practical workshops on the basic techniques in statistics and demography which are indispensable for the performance of the necessary tasks.

If one realizes that enhancing the capability of subordinate administrative staff is the key to the proper performance of tasks leading to effective achievements, one will also appreciate the true importance of training and the priority to be given to it.

E. General information

It is easy to assume that the consolidation of the administrative pyramid is sufficient to ensure that the operational machinery will become effective and lead to the achievement of the objectives set by the political sector. To make that assumption would be to forget that development hinges on whether the population concerned has reached a stage of awareness and is involved enough in the process of change to guarantee change.

While the effectiveness of planning largely depends on the training of staff, it is also contingent on the general information disseminated among the public at large.

Whatever the qualities of planning, the climate in which plans are formulated and carried out determines their success. It is essential to seek the involvement of the people, otherwise the recommendations contained in plans will remain dead letters. This is well understood by politicians, who give the media information long before plans go into effect so as to have in return some indication of how those plans will be greeted. If people realize that the relationship between population and development is still potentially controversial because it is complex and misunderstood and because of the political implications of the way in which it is interpreted, they will agree on the need to prepare media representatives in

order to facilitate their work and prevent any misunderstanding that could have adverse consequences.

Press conferences, impromptu, periodic presentations, press releases and briefings are among the various ways in which more precise information can trickle down to the general public. This concern might appear unrelated to the educational concern underlying the present guidelines. It derives from the objective of educating the general public, lest the effort to raise the political consciousness and provide training with a practical orientation should prove totally ineffective. Ultimately what this involves is placing emphasis on conditions as they exist on the ground. A receptive environment makes all the difference between success and failure. In that environment, the fermentation of dynamism and continuity produced by the population and development courses will proceed.

All the pedagogical methods are therefore interrelated. As in the case of development, the pursuit of effectiveness in this area does not permit one to disregard the overall complementarity of the methods.

IV. COURSE REQUIREMENTS AND SUBSTRATE

Instruction is not directed at inanimate objects or shapeless masses. Each applicant brings with him a body of experience. They come as individuals shaped by their environment and their education. They are not passive. While they are quite clearly social actors, what is most important in this case is that they will in the future be responsible for producing change. Thus, they combine participation in society with a deep involvement in the institutional machinery of the State, the promoter of development.

The statement of these rather obvious points serves as a reminder that the calibre of applicants for a training course is important and that individual efforts to receive advanced training are meaningless unless such training results in improvements in the social environment. Thus emphasis is placed once again on the ultimate purpose of a specific course. According to the approach suggested here, such a course is geared entirely towards the achievement of non-academic goals. The main point of the enterprise is to bring out the awareness that population is at the heart of all development concerns and that if its various aspects and implications are ignored, a distorted picture of development will result. The fruits of a course of training in population and development will in the final analysis be borne in the field, in the form of specific changes, and these will be the ultimate measure of its effectiveness.

This basic condition determines the requirements which will be set for the applicants, who are expected to be able to discharge their duties in the spirit of their mission.

A. Course admission requirements

The attempt to set recruitment standards is made with admission to the regular programme chiefly in mind. This programme has a formal framework and is designed to prepare the infrastructure of integrated development plans. Since this will be an operational and accountable infrastructure, there are two sets of requirements for admission to the training programme: one relates to the desirable level and content of academic studies, while the other concerns the degree of involvement in development activities.

A minimum requirement for an applicant to be accepted is a master's degree in a development-related area as formalized by government agencies, such as economics and sociology, or one of a number of related degrees which generally reflect a greater level of specialization, for example in geography, agronomics, statistics, etc.

In the final analysis, this academic grounding will be built upon in the field of work it has opened for the future trainee. This is why it is felt that all applicants must be able to show at least two years' professional experience. The advantage of such experience is that it represents a break between academic studies and the period of training, which therefore is seen as a complement to practical work rather than as a continuation of the educational process. It also makes up for the shortcomings in basic training in the least developed countries, for which some allowance may have to be made.

To make the training course more effective, it would be advisable to limit admission through an aptitude test. In this area, however, it is not easy to

decide what type of test should be administered for purposes of admission. Knowledge does not, after all, play a primary role at the outset. Of greater value in an interdisciplinary course is that the new student should display some propensity for synthesizing material, as the desire to broaden his range of skills shows. If such a test is to be designed for selecting trainees, it should be based on this ability to synthesize material rather than on knowledge, otherwise attested to by the university degree. The quality of degrees may vary depending on their origin, thus making evaluation difficult. However, in this case, attention will be focused not so much on specialized, job-related knowledge as on the basic grounding in the disciplines common to all the trainees, whatever their initial training. The standardization courses in the basic subjects are intended to overcome any disparities that might exist.

Recruitment requirements should therefore involve:

(a) The level and content of basic studies;

(b) The nature and length of job experience;

(c) A test of ability to synthesize material.

It should, however, be noted that a preliminary selection must be made by Governments, in line with their foreseeable needs.

B. Teaching requirements

A major aspect of the courses that has been deliberately left aside until now is the role played by the teaching staff in achieving the goals. That there can be no teaching without teachers is true for any educational process and is particularly important in this case.

The type of training to be given, combined with the interdisciplinary approach adopted, creates demands in striking contrast with what is generally required of teachers. Whereas, in most programmes, attention is focused exclusively on knowledge and teaching qualities, with regard to the relationship between population and development, as described above, instruction will first have to meet different criteria.

First of all, the cultural mosaic in the lecture-hall necessitates an effort to communicate that cannot be adequately sustained by a didactic approach. In small classes, the teacher should establish direct contact with each student, outside the presentation of his lecture, so that when he prepares his class, he is able to take account of each student's place of origin and, if need be, use such diversity to draw parallels or highlight differences that emerge from the original context. This means continually adapting. Indeed, quite a significant portion of the non-lecture courses involves comparing the different cultures represented and being able to discuss them at the end of the formal presentation. Besides the internal consistency appropriate to the subject taught, a large measure of flexibility in line with the range of cultures reflected by the trainees will therefore be recommended, especially as the field requires more judgement than knowledge.

Moreover, the interdisciplinary approach imposes a number of conditions that conflict with traditional teaching. Thus, while in principle a teacher normally has complete freedom in preparing his class, as long as he does not encroach upon a colleague's, in the present case, he will be asked to fit in, as a matter of priority, with the overall conceptual framework and, on the other hand, not to be afraid of wandering into neighbouring disciplines. Those disciplines must appear as complementary, each being a special part of the overall programme. Of course, such encroachments must not be so wilful as to cause interference with another subject. The main point is to achieve, at the practical level and within the framework of the programme, a degree of co-ordination between the various courses failing the achievement of integration, which is virtually impossible.

For this to be done, it will be necessary to go beyond mere dialogue, so that the reflexes necessary for synthesizing material might be acquired. For this purpose, it will be recommended that periodic seminars should be organized around a theme that is sufficiently complex for the various disciplines involved to be applied in the exchanges, discussion or joint interpretation. The results of such an exercise depend largely on the personal background of the teachers, who, from the outset, must be interdisciplinary-minded.

Clearly, the teaching staff's suitability for the programme not only depends on individual qualifications but also involves the organization of teaching within a given institutional framework. The organization of periodic seminars requires both a relatively stable teaching staff or consultants who are already in tune with the interdisciplinary approach and the existence of premises in a stable physical environment.

The choice of a location for the training course is of some importance. Since development springs from the decisions of national authorities and a training course in population and development is closely connected to the choice of an administration, it seems reasonable to favour the activities of international organizations in the area.

With regard to training in demography, the United Nations has established several regional centres: the Institut de formation et de recherche démographiques (IFORD) at Yaoundé, for the French-speaking African countries; the Regional Institute for Population Studies (RIPS) at Accra, for the English-speaking African countries; the Latin American Demographic Centre (CELADE) at Santiago, Chile; and the International Institute for Population Studies (IIPS) at Bombay, for Asian countries. The Cairo Demographic Centre serves the communities of the Arab world.

These institutions have no explicit mandate in the field of population and development; the basic aim of the instruction they provide is to train demographers.

However, at the interregional level, a French-language centre, CEDOR at Bucharest, existed up to 1984, and there is still an English-language programme attached to Moscow University, the specific focus of which is the relationship between population and development. It seems that those two institutions are well suited to the requirements of the third world, without for all that being able to satisfy latent needs. As national authorities become aware of the role played by their populations in development, they will want to take greater advantage of the facilities provided by training centres throughout the world. However, the

existence of regional institutions for instruction in demography gives rise to some ambiguity with respect to the educational goals pursued.

Although Governments tend to favour centres situated in their region, feeling that the training they provide more faithfully reflects the problems confronting their countries, it seems, in the final analysis, that when it comes to population and development, interregional centres are more responsive to the concerns of Governments. First, the high degree of specialization essential for training a demographer is entirely at odds with the interdisciplinary approach obtaining in the field of population and development. Secondly, the comparative approach to culture fostered by an interregional forum situated outside the regions to be developed appears more conducive to the training of trainees than a regional approach, which would fatally isolate local problems in the teaching process and tend to neglect the diversity of contexts and the relativity which must govern methods of action.

However, where priority is given to short-term action, a programme of the type envisaged for the executing agents might be located where the problems exist. Such a programme would consist of technical briefings organized on an ad hoc basis in line with specific short-term goals.

A regular training programme must, on the other hand, be accompanied by all the potential advantages of cultural interaction, in a setting in which each trainee will have to change his perspective as a prerequisite for his participation in the course.

At the same time, within the framework of regional training, it might even be desirable to plan mobile courses covering a small area both for the promoters and for a core of students: the variety of adjustments to be considered should be stressed. In no case, however, should one perspective be unilaterally given preference over the others, in a process whose main aim is to portray diversity.

C. External conditions for effectiveness

The training goals cannot be achieved simply by carefully organizing a programme of instruction or by providing teachers and students. All too often, the benefits of a training course are erased by various subsequent difficulties which hinder or prevent the profitable use of the training provided.

Thus unless they are transferred on their own initiative to new duties for which they receive a higher salary or which are more likely to lead to rapid career development on the basis of the diploma obtained, officials returning from a training course frequently find themselves entrusted with activities irrelevant to to their training. In such cases, which often occur, the training effort will be in vain.

Therefore, at the outset, the authorities selecting the trainees should give certain assurances that they will return to their original duties, without ruling out the incentive of promotion in the same post, but reducing at the same time the risks of turnover. We are well aware of the difficulties that might confront administrations, which are often in the midst of restructuring, if they have to keep operational posts open for one or two years. That is, however, the price they

must pay if they wish to increase their effectiveness or simply to fulfil their mandate.

The point at issue here is the development of institutional structures, which is part of a long-term process. In the countries of the third world, where training needs constitute the basic element of an operational infrastructure, meeting those needs over a period of time must be seen as the very key to the planning process and everything must be done to ensure that the exercise is conducted in a flexible fashion.

Thus, instruction in population and development, which generally leads to a diploma, should be officially recognized by the civil service. More often than not, however, only traditional diplomas are recognized, and they alone bring returns in promotion or pay.

To sum up, it would be advisable to obtain guarantees of a permanent post both from the departments sending their staff for training and from the civil service administration, so that the trainee will not lose heart or be encouraged to move out of the line of work to which his training commits him. In that way, the risks of educational wastage will be minimized.

Just as the phenomenon of development cannot be considered as an assembly of isolated elements and just as population is an integral part of that phenomenon, there can be no question of treating instruction in the subject of population as a series of courses given ex cathedra to lovers of learning. We have been able to see the full value of a global approach which embraces all aspects of a practically oriented training course. We have seen that the achievement of the goals depends as much on the context and future framework reserved for such courses as on the teaching itself. Thus, the courses themselves appear as a basic element in the development effort.

V. SUBJECT-MATTER

The regular programme proposed here consists of 825 class hours spread over two academic years. The hours are divided unequally between the two periods to enable an original end-of-course paper to be written during the second year. There will be 525 class hours in the first year, 300 in the second.

It should be said that the titles of the courses do not always do justice to their content. Although the titles employ familiar words which bring to mind traditional teaching, the substance tries to conform to the spirit of the programme, in the interdisciplinary perspective that characterizes the approach to development and its relationship with population. The specific goals assigned to the courses are not exhaustive; others may prove to be more useful and supplement or replace those proposed here.

The conceptual framework of development is explained in a first level of synthesis covering, as an introduction to the programme, these four principal axes or modules:

(1) Knowledge of the context;

(2) The population component;

(3) The instruments of change;

(4) The techniques.

The second level of synthesis is attained by the following courses:

Population policies (first and second years);

Project identification, formulation and evaluation (second year).

Finally, a number of courses involve practical exercises which account for 90 hours of the programme. A 10-hour seminar is planned for the end of the course, in order to allow a general debate providing a synthesis.

It should be noted that 60 hours are devoted to the standardization of initial training, in mathematics, statistics and economics. They are included in the total number of hours.

The curriculum is set forth below, first in the form of a tabular outline, then in a more detailed manner.

Tabular outline. Subject-matter

FIRST YEAR		
Standardization courses: Mathematics	Statistics	Economics

First level of synthesis: Conceptual framework of development

Modules

I Knowledge of the context	II The population component	III The instruments of change	IV The techniques
(a) Population sociology	(a) Population theories	(a) Development economics	(a) Population analysis
(b) Development sociology	(b) Fertility-mortality	(b) Development planning	(b) Electronic data processing for population studies
(c) Political sociology	(c) Internal migration	(c) Sectoral analysis: Education Employment Health Food Housing	(c) Multidimensional statistical analysis
(d) Cultural anthropology	(d) International migration		(d) Systems analysis
			(e) Survey techniques and sampling theory

Second level of synthesis: Population policies

SECOND YEAR

Modules

I Knowledge of the context	II The population component	III The instruments of change	IV The techniques
(a) Human ecology	(a) Family planning	(a) Regional planning	(a) Introduction to information theory
(b) History of developing regions	(b) Population and world peace	(b) Urban planning	(b) Econometric techniques
(c) Role of women		(c) Population and rural development	(c) Operations research
			(d) Taxonomy
			(e) Forecasting

Second level of synthesis: Population policies
Project identification, formulation and evaluation

End-of-course seminar

Curriculum

FIRST YEAR

First level of synthesis: Conceptual framework of development (10 hours)

General goal: The aim of this course is to provide trainees with the conceptual framework they will need to integrate the courses on specific subjects.

Specific goals:

1. To justify the course on the basis of the complementarity between the abstract and the concrete, between theory and practice.

2. To provide a systematic and dynamic perspective, which involves a definition of the concept of development.

3. To restore to development its own cultural context in relation to its original context.

4. To examine the relationship of population to development.

Module I: Knowledge of the context (90 hours)

(a) Population sociology (15 hours)

General goal: To familiarize trainees with the basic concepts required to engage in an analysis of (1) the elements of the socio-cultural system whose interaction determines population factors; (2) the implications of population factors for the structure of the socio-cultural system. The analyses themselves are part of the "viewpoint" module.

Specific goals: To enable the trainee

1. To understand the connection between demography and sociology, using appropriate concepts and terminology;

2. To describe and analyse different schematic outlines of the factors affecting the propensity to breed and to migrate, as well as those affecting mortality;

3. To begin explaining the impact of population factors on the socio-cultural system and vice versa.

(b) Development sociology (40 hours)

General goal: To highlight the interaction between development and society in a historical perspective, which is essential for analysing change and patterns of change.

Specific goals: To enable the trainee, working from specific cases:

1. To observe the relativity of social concepts and groupings in time and space, and to follow their evolution;

2. To study the interaction of traditional and modern structures, their evolution and the social upheavals due to change;

3. To identify reservations about and resistance to development through successive interventions and to evaluate their impact on population movements and changes in behaviour patterns producing demographic phenomena.

(c) Political sociology (15 hours)

General goal: To stress the role assumed by the State in development and the influence of the political system on development trends;

Specific goals:

1. To characterize the temporal and spatial transformations of the State;

2. To identify the various levels of the structure of power - international, ideological, national, situational - and the circumstances favouring the introduction of projects and the formulation of plans;

3. To define international relations, their forums and their impact on development.

(d) Cultural anthropology (20 hours)

General goal: To give the trainee a conceptual framework allowing him to appreciate a society in its cultural uniqueness, with special emphasis on the difficulty of interpreting cultural aspects without resorting to a framework of predetermined values.

Specific goals:

1. To highlight and illustrate by specific examples the importance of culture as a factor in promoting development;

2. To examine ways of arriving at an overall understanding of societies and to consider the various possible interpretations of a subject;

3. To study the problem of significant cultural elements and the shortcomings of translation.

Module II: The population component (65 hours)

(a) Population theories (10 hours)

General goal: To inform the trainee of the evolution of thinking on population and to highlight the ideological and situational factors underlying population policies.

(b) Factors behind and consequences of fertility and mortality (25 hours)

General goal: To identify the interrelated factors governing society: fertility on the one hand, mortality on the other.

Specific goals:

1. To identify the points where each phenomenon enters into development plans, and to determine how it influences the socio-economic structure;

2. To examine the theories explaining fertility and mortality in the light of different temporal and spatial contexts.

(c) Internal migration (20 hours)

General goal: To attempt to demonstrate the mechanism of internal migration and its importance for regional planning.

Specific goals:

1. To identify the socio-economic causes and consequences of internal migration and its key role in physical planning;

2. To analyse migration in relation to the environment, economic and social factors, and the attitudes of migrants.

(d) International migration (10 hours)

General goal: To familiarize the trainee with the main flows and trends in international migration and its relationship with socio-economic and political development.

Specific goals:

1. To provide information on contemporary migratory trends and flows;

2. To identify the relationship between migration and development factors, particularly technology transfers;

3. To examine contemporary international migration policies.

Module III: The instruments of change (100 hours)

(a) The economic aspects of development (30 hours)

General goal: To examine the role played by economic phenomena in development and to determine the points of linkage with demographic phenomena.

Specific goals:

1. To set forth the development theories that have succeeded one another over recent decades;

2. To study and interpret economic phenomena in so-called primitive societies;

3. To define the relationship with demographic phenomena within the framework of global structures.

(b) Development planning (40 hours)

General goal: To show how the purpose of planning is to tackle the complex of development problems, including demography, as part of an overall and integrated approach, and to encourage the trainee to think about the conditions under which the context may be deliberately changed.

Specific goals:

1. To describe the overall system of planning in terms of its objectives, content and procedures, as well as the main techniques used, their implications, potential and limits;

2. To review the major demographic-economic models;

3. To set in their socio-cultural and institutional context the difficulties encountered in implementing development projects.

(c) Sectoral analysis (30 hours)

General goal: To examine some special forms of relationship between population, economics and society, but within a comprehensive framework - education, employment, health, food, housing.

Specific goals:

1. To reaffirm the right of the individual to work, education, health, food and housing. To study in this context what is available in those sectors and the factors determining availability;

2. To describe the conventional planning methods in those sectors;

3. To examine how the development of models in this area has led to useful applications and what its possibilities are.

Module IV: The techniques (185 hours)

(a) Population analysis (45 hours)

General goal: To enable trainees who are not demographers to become acquainted with the rudiments of population analysis, in order to understand the origin of figures, but not to refine them.

Specific goals:

1. To introduce the tools of analysis - demographic measurements and indices, the Lexis diagram, the age pyramid;

2. Observation data and population structures;

3. Natural movement (fertility - mortality);

4. Migration;

5. Population projections.

(b) Introduction to electronic data processing for population studies (10 hours)

General goal: To enable the trainees to communicate their electronic data processing requirements to the engineers and analysts responsible for designing and producing electronic data processing systems.

Specific goals:

1. To provide information on the practical possibilities of electronic data processing in the field of population studies and at the planning level;

2. To familiarize trainees with the terminology and logical basis of electronic data processing;

3. To provide an understanding of the principal stages of analysis and an introduction to the writing of simple programmes in programming language.

(c) Multidimensional statistical analysis (100 hours)

General goal: To draw up a catalogue of statistical tools available for tackling population and development problems, working from specific cases that have been resolved. To set forth the theoretical justification, the advantages and limits of various methods. The trainee should be able to understand the methods and use this understanding to make an appropriate selection.

Specific goals:

1. To introduce the main concepts of statistics: linearity, correlation, variance;

2. To use specific examples to present: correlations and multiple and partial regressions; variance and co-variance analysis; factor analysis, the main components, discriminantal analysis and canonical analysis;

3. To provide an overview of graph theory.

(d) Systems analysis (10 hours)

General goal: To provide the trainees with the conceptual and technical tools necessary for the systems approach. This instrument makes it possible to integrate effectively demographic variables in critical analysis and to formulate development strategies.

Specific goals: To enable the trainee:

1. To find his way among the techniques available for producing models of the anatomy or architecture, physiology or functioning, behaviour and evolution of a system, and to understand the limitations of those techniques;

2. As far as methods are concerned, to distinguish between systems dynamics, hierarchical systems, living systems;

3. To evaluate, from a systems standpoint, a new model and to differentiate between the genuine operational use of systems and an artificial holistic approach.

(e) Survey techniques and sampling theory (20 hours)

General goal: To enable trainees to judge the validity of data suggested for use, but not to collect such data, and to engage in meaningful discussions with sample survey specialists.

Specific goals:

1. To present the principles and operational stages of sample surveys, according to their aim and the data-collection environment;

2. To review the various sampling methods (random sampling, stratified sampling, cluster sampling, multi-stage area sampling). To describe the principles and appropriate use of such methods.

Second level of synthesis: Population policies (15 hours)

General goal: To provide, towards the end of the first year, the necessary synthesis within the framework of population policies, which are the end-product of the interdisciplinary approach. The trainee must be able to formulate coherent population policies and integrate them into development plans.

Specific goals:

1. To characterize population policies in terms of planning and the given context;

2. To evaluate the compatibility of demographic goals with socio-economic goals;

3. To evaluate the effectiveness of population policies using available tools.

SECOND YEAR

Module I: Knowledge of the context (30 hours)

(a) Human ecology (10 hours)

General goal: To restore to the population living in communities, whether organized or not, the physical framework in which it evolves.

Specific goals:

1. To show the dependency of social organizations on the biosphere and the importance of the mutual relationship between the environment and communities;

2. To determine the influence on populations of spontaneous or induced changes in the environment and its socio-economic components.

(b) History of developing regions (10 hours)

General goal: By considering a specific civilization, to establish a synthesis taking into account the time factor.

Specific goals:

1. To demonstrate the original identity of the civilizations or major cultures of the third world;

2. To highlight the elements that might resist a development policy and their impact on the known demographic structure.

(c) Role of women (10 hours)

General goal: By removing the role of women from its context, to produce an awareness that the question involves at least half the people of the world; from birth they are subject to discrimination which generally results in an inferior status despite the major role they have to play.

Specific goals:

1. Position and responsibilities of women in rural areas of the third world;

2. Women in transition in urban areas (trade);

3. Opportunities for economic emancipation and integration;

4. Importance of maternal and child health.

Module II: The population component (25 hours)

(a) Family planning (15 hours)

General goal: To emphasize the concept of birth spacing, the essential aim of which is to make life easier for women as individuals, and to emphasize the other meaning of the term as it relates to population-control methods.

Specific goals:

1. To present family planning as the basis of maternal and child welfare and as a fundamental, though inadequate, element of population policies;

2. To examine the conditions for a maternal and child welfare programme to be successful both at the institutional level and in the cultural context.

(b) Population and world peace (10 hours)

General goal: Within the framework of the World Plan of Action, as revised at the International Conference on Population held at Mexico City, to highlight the fact that the arms race and conflicts impede the free play of demographic movements and throw population policies off track. To show the impact of armed conflicts on death rates, birth rates and population movements, and, consequently, on development.

Specific goals:

1. To place the peace option in the wider context of human rights guaranteeing the full development of the family;

2. To study the causes of war and its effects on populations, where their movement is not itself a determinant factor;

3. To present prerequisites for the reduction of tension (stopping the arms race, oppression, the expansion of markets, the competition for energy sources).

Module III: The instruments of change (70 hours)

(a) Regional planning (40 hours)

General goal: The aim of this course is to set forth the issues and the methods and techniques of analysis, model-making and forecasting which may be applied to determine the economic activities and the infrastructure of rural and urban areas that are most appropriate for particular regions. It is expected that the trainees will gain insights into spatial, demographic, economic and social factors simultaneously, as a basis for selecting regional policies.

Specific goals: At the end of this course, the trainees should be able to identify the methods and techniques suitable for tackling a physical-planning problem; they should be able to carry out a critical and analytical comparison of the various planning solutions, and to evaluate the future effects of choices made, using systems-analysis tools and projections; they should be capable of

constructing a methodological approach for a socio-demographic physical-planning project.

(b) Urban planning (15 hours)

General goal: To familiarize trainees with the basic characteristics and causes of urban migration, and with its impact on the infrastructure of towns. To particularize the general situation in terms of the context and to present urban planning as an integral part of regional planning.

Specific goals:

1. To learn about the relationship between urban infrastructure and urban planning by studying the specific metabolism of towns;

2. To examine the use and legal status of urban land, and land registers, as urban-planning tools;

3. To conduct an overall future-oriented study of the functionalism of housing.

(c) Population and rural development (15 hours)

General goal: To focus on rural planning in terms of rural communities and their distinctive problems. To identify the complementary relationship between urban planning and rural planning and examine their integration in regional planning. To prepare the necessary data base for the formulation of rural development policies with a population component.

Specific goals:

1. To study the place of food resources and industrial crops in specific rural situations and their effect on the demographic and social context;

2. To present from a rural point of view the phenomenon of urban migration;

3. To analyse the effects of regional and national policies on grass-roots community plans for rural development.

Module IV: The techniques (75 hours)

(a) Introduction to information theory (10 hours)

General goal: To present an effective technique - more exacting than the conventional approach - for producing an information model. To provide the twin opportunity of structuring objective elements as a whole and breaking down structural relations.

Specific goals:

1. To show that probability theory is a natural extension of logic and that information theory presupposes probability theory;

2. To introduce entropy functions and use them to measure the degree of disorganization and concentration. To derive notions of interdependence analysis from these functions.

(b) Econometric techniques (20 hours)

General goal: To enable the trainee to judge a socio-economic demographic model by understanding its construction and operation.

Specific goals:

1. To introduce equation systems, multicolinearity analysis, and the problem of identifying the simultaneous equation system;

2. To present non-recursive linear model analysis, particularly the analysis of structural equations according to the two-stage least squares method.

(c) Operations research (15 hours)

General goal: Operations research, the purpose of which is scientific decision-making, involves the application of a method of tackling the complex problems facing large establishments. The aim will be to familiarize the trainee with methods of producing optimal results in the face of given constraints.

Specific goals:

1. To introduce the basics of linear programming and some algorithms for problem-solving (simplex, dual, etc.);

2. To present simulation methods based on the "Monte Carlo methods" (Computer production of a partially random process);

3. To introduce stochastic processes, particularly Markov chains.

(d) Taxonomy (10 hours)

General goal: To familiarize trainees who are remotely or closely involved to planning with a series of techniques to enable them to classify or to arrange in homogeneous groups elements of heterogeneous units.

Specific goals:

1. To show the link between taxonomy and information theory, where processes involving small exchanges of energy control the structure or movement of large masses;

2. To present some classification methods: similarity graphs, methods based on overall similarity (Rohlf), on distribution, group analysis, the I-distance method (Ivanovic);

3. To illustrate the I-distance method by applying it to a case involving regional planning.

(e) Forecasting (20 hours)

General goal: To encourage the trainees to forecast the future from present trends and to anticipate the consequences of long-term planning.

Specific goals:

1. To present the techniques for preparing forecasting models;

2. To assess the validity of planned goals, in a long-term perspective;

3. To integrate demographic forecasting within the framework of prospective social systems.

Second level of synthesis (90 hours)

(a) Population policies (45 hours)

Population policies are the subject of a "wrap-up" presentation which constitutes the core of an end-of-course seminar.

(b) Project identification, formulation and evaluation (45 hours)

General goal: To set the trainee practical problems involving the application of the lessons learned on the subject of population and development.

Specific goals:

1. To study contexts comprehensively;

2. To accustom the trainees to preparing project documents, including their financial aspects;

3. To provide them with procedures for evaluating completed projects.

VI. CONCLUSION

We have been able to see that population and development courses are not an element of demography but rather an extension of it. They do not therefore represent a particular aspect of population studies but rather the general framework for development itself.

Thus, this type of training is aimed not at the demographer except to enable him to integrate his skills, but mainly at the planner and at all those responsible for development plans and programmes.

The proposed curriculum is certainly far from unique. It was presented here by way of illustration, since it satisfies the requirements of the conceptual framework outlined for the relationship between population and development. Essentially it is the spirit behind it that is supposed to guide those who will be responsible for teaching the subject. There would be no point in continuing to dissect societies in order to deliver the parts to specialists and to base development on isolated growths that are more like outgrowths.

Only by integrating population in development and adopting an interdisciplinary approach will it be possible to grasp fully a phenomenon that has up to now resisted understanding. As practice inherits the concepts that foster it, it is hard to see how an increasingly technical type of education can produce results that are lasting and of benefit to the people.

Recognition of the phenomenon of population remains the basic condition for the well-being of people.

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